

**IN THE UNITED STATES DISTRICT COURT
MIDDLE DISTRICT OF TENNESSEE**

**TENNESSEE CLEAN WATER NETWORK
and TENNESSEE SCENIC RIVERS
ASSOCIATION,**

Plaintiffs,

v.

TENNESSEE VALLEY AUTHORITY,

Defendant.

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No. _____

COMPLAINT

Plaintiffs, the Tennessee Clean Water Network and the Tennessee Scenic Rivers Association (the “Conservation Groups”), hereby allege as follows:

I. NATURE OF THE ACTION

1. This citizen enforcement action challenges ongoing, unlawful discharges of toxic metals and other pollutants by Defendant Tennessee Valley Authority (“TVA” or “Defendant”) into the Cumberland River from its coal-fired electricity generating plant near Gallatin, Tennessee (“the Gallatin Plant” or “the Plant”), in violation of the Clean Water Act (“CWA” or “the Act”), 33 U.S.C. §§ 1251–1376.

2. During the nearly 60 years TVA has operated coal-fired units at the Gallatin Plant, it disposed of the Plant’s coal combustion waste and practically any other waste generated at the site in “coal ash ponds” at the back of the Plant. *See* Exhibit 1.

3. The Gallatin waste disposal site is currently composed of three unlined coal ash ponds that contain over 2.5 billion gallons of coal combustion and other wastes and cover over

1000 acres adjacent to the Cumberland River and Old Hickory Lake, roughly 4.5 miles upstream of the City of Gallatin.

4. The waste TVA dumps into the coal ash ponds contains numerous toxic substances, including chromium, arsenic, lead, aluminum, boron, iron, sulfate, selenium, and manganese, which are harmful to human health and the environment.

5. Treatment and discharge of pollutants from the Plant into groundwater and surface waters at the Gallatin Plant are governed by a National Pollutant Discharge Elimination System (“NPDES”) Permit No. TN 0005428 (“the NPDES Permit” or “the Permit”) issued by the Tennessee Department of Environment and Conservation (“TDEC”), which also has authority to enforce the terms of the Permit. The Permit is attached hereto as Exhibit 2.

6. On June 21, 2011, TVA’s Office of Inspector General issued a report finding that, under its own rules and guidance documents, TDEC should issue a Notice of Violation and require TVA to initiate corrective measures as a result of illegal discharges into the Cumberland River.

7. TDEC did not initiate corrective measures or an enforcement action against TVA for Permit violations in response to the Inspector General Report.

8. In fact, TDEC has only inspected the Gallatin coal ash ponds five times in almost nine years — on March 23, 2006, March 27, 2008, December 15, 2009, March 21, 2012, and August 21, 2014.

9. For many years, the coal ash lagoons at the Gallatin Plant have been unlawfully releasing toxic contaminants and discharging pollutants through unpermitted seeps and through numerous sink holes below the coal ash ponds, in violation of the NPDES Permit and/or the Clean Water Act’s prohibition against unpermitted discharges.

10. TVA has also allowed the very pollutants that the coal ash ponds were supposed to treat and remove to enter the groundwater and nearby surface waters, including the Cumberland River, directly and through hydrologic connections in the groundwater, all in violation of the Permit and/or the Clean Water Act.

11. The coal ash ponds are hydraulically unstable and have been deemed by the United States Environmental Protection Agency (“EPA”) to be a “significant hazard,” that threatens people and the environment in the area.

12. As long as the coal ash and other wastes remain in these leaking, unlined coal ash ponds, they will continue to discharge pollutants into the groundwater and surface waters of the United States in violation of the Clean Water Act. These discharges will continue to place the people who live, work, and recreate in close proximity to the Cumberland River at risk from groundwater contamination, surface water contamination.

13. On November 10, 2014, through counsel, the Conservation Groups issued a 60-day Notice of Violation letter to TVA, TDEC, and EPA under the citizen suits provision of the Clean Water Act, 33 U.S.C. §1365, alleging multiple violations of the Act; *See* 33 U.S.C. §§ 1251-1387. The notice stated that the Conservation Groups intended to file a complaint in federal court against TVA to enforce requirements of the Clean Water Act and the Permit. A copy of the Notice letter is attached as Exhibit 3.

14. More than sixty days have passed since the Conservation Groups provided their Notice of Intent to Sue, and the violations identified in the notice letter are continuing at this time and will continue in the future absent a court order for corrective action.

15. On January 7, 2015, the State of Tennessee brought a civil enforcement action against TVA, stating in a Verified Complaint that TVA had violated the Tennessee Solid Waste

Disposal Act, as amended, Tenn. Code Ann. §§ 68-211-101 to 68-211-124 (“SWDA”), the Tennessee Water Quality Control Act of 1977, as amended, Tenn. Code Ann. §§ 69-3-101 to 69-3-137 (“TWQCA”), and the rules and regulations promulgated thereunder, for injunctive relief and the assessment of civil penalties (herein “State Complaint”).

16. The State Complaint was filed in response to the Conservation Groups’ Notice of Intent to Sue.

17. TDEC’s Commissioner, Robert Martineau, formerly represented TVA as legal counsel in a “wide variety of matters,” including a federal enforcement action by the State of North Carolina for air pollution from its coal fired power plants. In that action, the federal court found TVA in violation of the Clean Air Act.

18. When Mr. Martineau was asked in a recorded and televised interview, “Do you think it’s odd that TVA wanted you to sue them?”, Mr. Martineau stated, “they’d rather be dealing with us than a federal judge.” Attached hereto as Exhibit 4 is a true and correct copy of the print version of the interview in which Mr. Martineau made that statement and others regarding the state action.

19. It is the state’s policy under these circumstances to allow citizen groups like the Conservation Groups to intervene by stipulation in the state court enforcement action, and the Chancery Court has permitted the Conservation Groups to intervene.

20. The State Complaint did not include multiple ongoing violations of the Clean Water Act, including: (1) multiple permit violations alleged by the Conservation Groups in the 60-day notice; (2) that TVA is unlawfully discharging pollutants into the surface water of the Cumberland River, as opposed to the groundwater beneath the Gallatin Plant coal ash facility

only; and (3) that TVA unlawfully discharged, and continues to unlawfully discharge, coal ash into Sinking Creek, a water of the United States.

21. Accordingly, the Conservation Groups should be permitted to bring this separate action against TVA for violations of the Clean Water Act.

II. PARTIES AND STANDING

A. The Conservation Groups and their Members

22. The Conservation Groups are Tennessee non-profit organizations whose missions include protecting surface and ground waters from contamination. TVA's unlawful pollution of the Cumberland River and adjacent groundwater by illegal discharges from its coal ash ponds and storage areas at the Gallatin Plant adversely affect the recreational, environmental, economic, aesthetic, and quality-of-life interests of the members of the Conservation Groups.

23. Affidavits describing the basis for the Conservation Groups' standing are attached as Collective Exhibit 5. Plaintiff Tennessee Scenic Rivers Association ("TSRA") is a non-profit organization whose mission includes protecting surface and ground waters from contamination. TVA's unlawful pollution of the Cumberland River and adjacent groundwater by illegal discharges from its coal ash ponds and storage areas at the Gallatin Plant adversely affect the recreational, environmental, economic, aesthetic, and quality-of-life interests of TSRA's members of the Conservation Groups.

24. TSRA is a volunteer organization dedicated to the preservation, protection, and restoration of the scenic, free-flowing rivers of the State of Tennessee.

25. Based in Nashville, Tennessee, the organization has approximately 700 members across the state and the south.

26. Formed in 1966, TSRA works to protect rivers, to provide training and instruction

in paddling, canoeing, and kayaking, and to offer opportunities to use and enjoy Tennessee's rivers. TSRA also organizes and sponsors paddling trips on flat and whitewater rivers throughout Tennessee, including the Cumberland River, Old Hickory Reservoir, the Collins and Buffalo Rivers, and Spring Creek.

27. TSRA is active in conservation issues, joining with other groups to combat threats to rivers like Dry Fork and threats to entire watershed areas posed by practices like mountain top removal coal mining.

28. TSRA members "adopt" streams to monitor health, and conduct cleanups on rivers and streams. TSRA members enjoy club-sponsored trips year-round and offer instruction in sea kayak, whitewater canoe, C-1 and kayak, as well as self-rescue, swiftwater rescue, CPR, trip leader seminar and Wilderness First Aid.

29. TSRA members use, paddle, fish in, and enjoy the Cumberland River in the vicinity of and downstream of the Gallatin Plant. The pollution from the coal ash ponds at the Gallatin Plant impairs these members' use and enjoyment of the Cumberland River and other waters in the vicinity of the Gallatin Plant. Continued contamination of the groundwater and the Cumberland River will harm the interests of TSRA's members who live, work, and recreate in the vicinity of the Gallatin Plant and who use and enjoy the Cumberland River and other waters in the vicinity of the plant.

30. Plaintiff Tennessee Clean Water Network ("TCWN") is a nonprofit corporation organized under the laws of the State of Tennessee, with its principal office in Knoxville, Tennessee. TCWN empowers Tennesseans to exercise their right to clean water and healthy communities by fostering civic engagement, building partnerships and advancing, and when necessary, enforcing water policy for a sustainable future. TCWN was organized for, among other

reasons: to advocate for strong policies and programs that result in more effective protection and restoration of Tennessee waters; to educate organizations, decision-makers, and the public about important water resource issues; and to ensure the protection and restoration of Tennessee's waters.

31. TCWN is a membership organization, and has members who are injured by the violations alleged herein, including members who live, work, and/or recreate on the Cumberland River downstream from the Gallatin Plant discharges, and have recreational, property, health, and aesthetic interests in these waters.

32. These injuries will not be redressed except by an order from this Court assessing civil penalties against TVA and requiring TVA to take immediate and substantial action to stop the flow of pollutants into the groundwater and surface waters, to empty the impoundments of all coal combustion byproducts, to move its storage of coal ash from unlined impoundments and away from banks of the Cumberland River, to remediate the groundwater contamination at the Gallatin Plant, and to comply with the other relief sought in this action

B. TVA

33. Defendant TVA is a corporate agency and instrumentality of the United States created by and existing pursuant to the Tennessee Valley Authority Act of 1933. *See* 16 U.S.C. §831 ("the TVA Act").

34. TVA has its headquarters in Knoxville, Tennessee, and operates a facility located at 1499 Steam Plant Road, Gallatin, Sumner County, Tennessee 37066, known as the TVA Gallatin Fossil Plant. Service of process may be made on TVA through William D. Johnson, Chief Operating Officer, 400 West Summit Hill Drive, Knoxville, Tennessee, 37902.

35. TVA is a “person” within the meaning of section 502(5) of the Clean Water Act, 33 U.S.C. § 1362(5).

36. The TVA Act provides that TVA “[m]ay sue or be sued in its corporate name.” 16 U.S.C. §831(c).

III. JURISDICTION and VENUE

A. Federal Question Jurisdiction

37. The Conservation Groups bring this enforcement action under the citizens’ suit provision of the Clean Water Act, 33 U.S.C. § 1365. This Court has federal question jurisdiction over this action pursuant to 28 U.S.C. § 1331.

38. TVA is subject to the jurisdiction of this Court for the allegations stated herein pursuant to the Clean Water Act, 33 U.S.C. § 1323(a), which states that, “Each department, agency, or instrumentality of the executive, legislative, and judicial branches of the Federal Government... shall be subject to, and comply with, all Federal, State, interstate, and local requirements, administrative authority, and process and sanctions respecting the control and abatement of water pollution in the same manner, and to the same extent, as any nongovernmental entity[.]”

B. Venue

39. Venue is proper in this Court pursuant to 28 U.S.C. § 1391(b) and 33 U.S.C. § 1365 (c)(1). The Clean Water Act violations alleged here have occurred and are occurring in the Middle District of Tennessee. TSRA is also based in the Middle District of Tennessee.

IV. LEGAL BACKGROUND

40. The Clean Water Act seeks to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” 33 U.S.C. § 1251(a). To accomplish that objective,

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Congress set the national goal that “the discharge of pollutants into the navigable waters be eliminated.” *Id.* Accordingly, the Act, 33 U.S.C. § 1311(a), prohibits the discharge of pollutants from a point source to waters of the United States except in compliance with, among other conditions, an NPDES permit issued pursuant to 33 U.S.C. § 1342.

41. Each violation of an NPDES permit—and each discharge of a pollutant that is not authorized by such permit—is a violation of the Clean Water Act. 33 U.S.C. §§ 1311(a); 1342(a); 1365(f)(6).

42. The Clean Water Act defines a “point source” as “any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, [or] container . . . from which pollutants are or may be discharged.” 33 U.S.C. § 1362(14). Under this broad definition, the discharge of pollutants from mining pits, slurry ponds, sediment basins, and mining leachate collection systems have been held to be point sources. “The term ‘point source’ has been taken beyond pipes and ditches and now includes less discrete conveyances, such as cesspools and ponds.” *Northern Cal. River Watch v. City of Healdsburg*, 2004 U.S. Dist. LEXIS 1008 (N.D. Cal. Jan. 23, 2004) (citing *Cnty. Ass’n for Restoration v. Bosma Dairy*, 305 F.3d 943, 955 (9th Cir. 2002); *Washington Wilderness Coal. v. Hecla Mining Co.*, 870 F. Supp. 983, 988 (E.D. Wash. 1994)), *aff’d*, 496 F.3d 993 (9th Cir. 2007); *accord U.S. v. Earth Sciences, Inc.*, 599 F.2d 368, 374 (10th Cir. 1979) (“[W]hether from a fissure in the dirt berm or overflow of a wall, the escape of liquid from the confined system is from a point source.”); *Consolidation Coal Co. v. Costle*, 604 F.2d 239, 249-50 (4th Cir. 1979) (finding that “discharges from coal preparation plant associated areas,” which included slurry ponds, drainage ponds, and coal refuse piles, were within Clean Water Act definition of point source), *rev’d on other grounds*, 449 U.S. 64 (1980).

43. In addition, a “point source need not be the original source of the pollutant; it need only convey the pollutant to ‘navigable waters.’” *South Fla. Water Mgmt. Dist. v. Miccosukee Tribe of Indians*, 541 U.S. 95, 105 (2004); accord *West Va. Highlands Conservancy, Inc. v. Huffman*, 625 F.3d 159, 168 (4th Cir. 2010) (permits are required for discharges from point sources that “merely convey pollutants to navigable waters”). Thus, ditches and channels that convey pollutants, but are themselves not the original source of the pollution, constitute point sources.

44. Under the Act, a conveyance of pollutants includes unintentional conveyances, for example, through natural-formed ditches, gullies, or fissures. See *Sierra Club v. Abston Constr. Co.*, 620 F.2d 41, 45 (5th Cir. 1980) (discharge from mining pits and spoil piles through naturally formed ditches caused by gravity flow at a coal mining site are point sources); *Earth Sciences*, 599 F.2d 368 (unintentional discharges of pollutants from a mine system designed to catch runoff from gold leaching are point sources); *North Carolina Shellfish Growers Ass’n v. Holly Ridge Assocs., LLC*, 278 F. Supp. 2d 654, 679 (E.D.N.C. 2003) (“Notwithstanding that it may result from such natural phenomena as rainfall and gravity, the surface run-off of contaminated waters, once channeled or collected, constitutes discharge by a point source.”).

45. The Cumberland River and its tributaries are waters of the United States.

46. None of the continuing discharges described herein, other than those through Outfall 001, is authorized by the NPDES Permit or by any other permit.

V. FACTUAL BACKGROUND

A. The Gallatin Plant and the Cumberland River

47. The Gallatin Plant is an active coal-fired power plant located approximately 4.5 upstream of Gallatin, Sumner County, Tennessee, on a narrow peninsula on the north bank of a

dammed reservoir of the Cumberland River known as Old Hickory Lake.

48. The Gallatin Plant has been in operation since the late 1950s, and currently consists of four coal-fired electric generating units with a net generating capacity of 976 megawatts.

49. The Gallatin Plant burns approximately 4,000,000 tons of coal annually. Coal ash is a by-product of burning coal. The Gallatin Plant produces approximately 235,000 tons of coal ash each year. TVA stores the coal ash in waste ponds behind the Plant.

50. TVA's coal ash waste ponds are unlined and are separated from the Cumberland River and Old Hickory Lake only by a series of dams made of earth and/or coal ash.

51. Old Hickory Lake is a popular recreation site for swimming, boating, fishing, and other water sports.

52. The Cumberland River provides drinking water for residents of Gallatin and Nashville in Sumner and Davidson Counties, as well as for residents of Rutherford and Williamson Counties.

53. The City of Gallatin's drinking water system withdraws water from the Cumberland River approximately one and one-half miles downstream from the Gallatin Plant. The Nashville drinking water intake is downriver from the Gallatin Plant.

54. The City of Gallatin's contaminant source inventory lists the Gallatin Plant as a primary threat to its drinking water supply.

A. The Coal Ash Ponds

55. To store the coal ash it generates at the Gallatin Plant, TVA combines the coal ash with water and sluices it away from the Plant into its vast complex of coal ash waste ponds.

56. TVA then "treats" the water by allowing the ash to settle to the bottom in the ash

ponds. TVA next sends the water to a series of “stilling ponds” for additional settling, and eventually discharges the water into the Cumberland River. *See Exhibit 5, attached.*

57. Pursuant to its NPDES Permit, TVA is authorized to release its coal ash wastewater into the Cumberland River from one specific outfall only (Outfall 001). Any other discharge of wastewater from the coal ash facility constitutes a violation of the NPDES Permit and the Clean Water Act.

58. There are a series of unlined coal ash ponds at the Gallatin Plant, one of which is closed, and all of which are constructed of ash or earthen dikes that lack cohesion and allow coal ash to leak directly into the Cumberland River through a number of seeps in the dikes.

59. TVA has known for many years that its coal ash waste ponds and operations contaminate the groundwater, and that the groundwater contains dangerous levels of pollutants.

60. According to TVA’s own report, TVA constructed the coal ash ponds over topography that it expected would allow the ash to be in contact with the groundwater and to flow through to the Cumberland River. For instance, TVA states:

- *“Water-table elevations are probably within the ash disposal pond.”*
- *“Bedrock joints and the topography probably control the actual flow of groundwater.”*
- *“The general direction of ground-water flow is expected to be from the active ash pond toward the river.”*
- *“Because of the karst terrain in the Gallatin Plant area, ground water can become rapidly polluted.”*
- *“Extensive solution of the bedrock beneath Colbert, Cumberland and Gallatin Steam Plants increases the pathways for potential leachate to move offsite.”*
- *“Ground-water gradients at these sites are expected to be directly toward the nearby reservoirs.”*

· “[Gallatin is] underlain by very soluble carbonate rock...*ground water could be discharging into the reservoir through solution cavities with little or no attenuation.*”

Potential Ground-Water Quality Impacts at TVA Steam Plants, Report No. WR28-2-520-119, September 1982, at pp. 35-36, 80 (emphasis added).

61. Despite this knowledge, TVA has continued to dispose of coal ash and other wastes in the ponds for decades and has taken no steps to remediate the contamination.

62. Below is a map prepared by TVA that depicts the flow of the groundwater from the peninsula toward the Cumberland River in all directions.

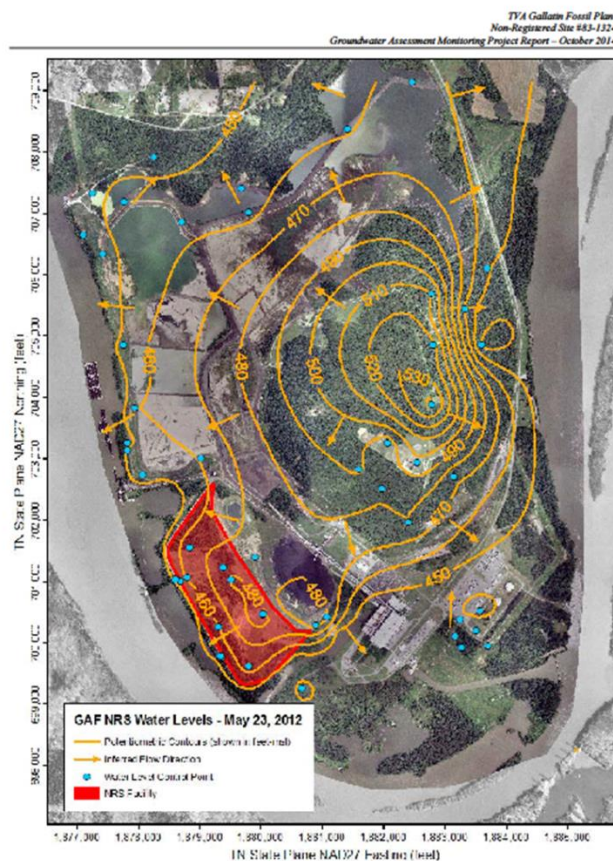


Figure 7. Site-Wide Potentiometric Contours (May 23, 2012)

63. In the late 1980s, TVA confirmed that contaminated groundwater had migrated offsite and impacted private wells, contaminating them with toxic substances such as iron and boron. Upon information and belief, TVA did not inform the well owners that it had contaminated their wells with these substances.

64. Because the contaminated groundwater is hydrologically connected to the Cumberland River, TVA's discharge into the groundwater also constitutes a discharge into the Cumberland River.

65. TVA has also been aware for many years of the presence of "seeps" or leaks from its ash ponds that allow the discharge of pollutants directly into the Cumberland River. TVA has failed to properly maintain the impoundments to prevent seeps, or to properly inspect, identify, and remediate these seeps.

66. These seeps may indicate that the dikes containing the ash are unstable.

67. Similar seeps were identified at TVA's Kingston Fossil Plant prior to the catastrophic failure of its similarly-constructed coal ash impoundment in 2008.

68. "Karst" topography is defined as topography formed over limestone or dolomite, and characterized by sinkholes, caves, and underground drainage. The Gallatin Plant site is located in an inherently unstable area with karst topography and extensive historic sinkhole activity. Below is a map reflecting the extent of the sinkhole problem at the Gallatin Plant.

Gallatin Power Station Seep, Monitoring Wells, and Coal Ash Impoundments With Sinkhole Data Overlaid



69. In the 1970s, so much coal ash waste escaped from the ash pond through sinkholes into the groundwater and/or the Cumberland River that TVA undertook a study to determine how to stop the release.

70. A June 13, 1977 TVA memorandum titled “Magnitude of Ash Disposal Pond Leakage Problem-Gallatin Steam Plant,” reports that the sinkholes would be difficult to find and that there is no assurance they could be effectively plugged. Specifically, TVA stated:

the network of solution cavities and crevices in the groundwater system under the pond is extensive; that identification of all the sinkholes which presently leak from the pond to this system would require extensive field surveys; and that plugging the presently leaking sink holes would give no assurance that other sinkholes would not begin to leak.

71. With respect to the magnitude of the problem of the sinkholes leaking coal ash into the groundwater, the 1977 report states, “The leakage rate is equal to the inflow rate of the sluiced water into the pond ...”

72. In other words, the waste ponds that TVA used for coal ash disposal after 1970 held nothing from the time they opened in approximately 1970 until at least 1977, and all of the coal ash that TVA sluiced into the ponds flowed through the ponds and into the groundwater and Cumberland River.

73. Other sinkholes appeared again and caused illegal discharges of coal ash waste in at least 2005 and 2010.

74. The 2010 sink hole developed shortly after and as a result of the flood of May 2010.

75. In 2009, EPA determined that the coal ash ponds at the Gallatin Plant present a “significant hazard” in the event of dam failure or mis-operation. This designation indicates that such a failure could cause economic loss, environmental damage, or other harmful impacts.

76. In 2013, EPA also found that the earthen dams at the Gallatin Plant were in only “fair” condition, and remained in need of improvement. In particular, EPA concluded that the

hydrologic/hydraulic safety at the Gallatin Plant was unacceptable due to the likelihood of coal ash escaping from the ponds into the Cumberland River when the river floods.

77. EPA stated that improvements to rectify these shortcomings “should be given the highest priority” because of the potential for serious impacts on human health and the environment.

78. TVA has not cured all of the deficiencies identified by EPA, and continues to operate with dangerous structural conditions, ongoing contamination of groundwater and the Cumberland River, and seeps that leak pollutants from the coal ash ponds directly into the groundwater and the Cumberland River.

B. The Abandoned Ash Pond: Non-Registered Site #83-1324

79. From 1959 until approximately 1970, TVA disposed of its coal ash and other wastes in a series of unlined ponds beside the Cumberland River on the southwest side of the peninsula.

80. TVA closed these ponds in approximately 1970 because they reached capacity. TVA now refers to this area as Non-Registered Site #83-1324 (the “Abandoned Ash Pond”).

81. The Abandoned Ash Pond covers nearly 73 acres, is about 25 feet deep, and contains an unknown amount of coal ash.

82. Almost 30 years after it closed the Abandoned Ash Pond, in approximately 1997, TVA developed a closure plan for the Abandoned Ash Pond at TDEC’s request.

83. In 2000, 30 years after closure, as part of the closure plan required by TDEC, TVA started monitoring the groundwater for coal ash contamination.

84. By at least 2002, TVA’s groundwater monitoring indicated the presence of

beryllium, cadmium, and cobalt at or exceeding EPA's maximum containment levels ("MCLs") for groundwater protection.

85. As a result of these reports of groundwater contamination, TVA should have submitted a Groundwater Quality Assessment Plan to TDEC within forty-five (45) days and should have initiated an assessment of corrective measures within ninety (90) days. *See* Tenn. Comp. R. & Regs. 0400-11-01.04(7)(a).

86. TVA did not submit a Groundwater Quality Assessment Plan to TDEC.

87. Additionally, as a result of the reports of groundwater contamination, TDEC should have sent TVA a Notice of Violation for violating the Groundwater Protection Standard. *Id.*

88. TDEC did not send TVA a Notice of Violation.

89. Despite clear evidence of groundwater contamination from the coal ash as early as 2002, it was not until the fall of 2011 that TVA installed additional groundwater monitoring wells at the Abandoned Ash Pond.

90. A 2012 TVA study found that groundwater discharging into the Cumberland River from beneath the Abandoned Ash Pond contained beryllium, cadmium, nickel, and zinc at levels that "may pose a risk" to fish and aquatic life in the Cumberland River, and that this risk will continue into the future.

91. On November 25, 2014, TVA submitted a Groundwater Assessment Monitoring Project Summary and Risk Assessment Report to TDEC which confirmed exceedances of various primary and secondary MCLs related to coal ash byproduct in the groundwater at the Gallatin Plant.

92. Despite the fact that TVA should have initiated an assessment of corrective

measures within 90 days of the first reports of exceedances – in 2002 – the November, 2014 report did not propose any corrective measures, but instead proposed to reduce the frequency of groundwater monitoring.

93. In February, 2015, independent testing of the sediment at four locations at the shore of the Cumberland River adjacent to the Abandoned Ash Pond showed levels of arsenic above EPA Region 4 sediment screening values, two of the sediment samples exceeded EPA Region 4 sediment screening values for copper and nickel, and one exceeded that standard for zinc.

94. The unpermitted flows of untreated wastewater from the Abandoned Ash Pond constitute illegal discharges into the groundwater and the Cumberland River.

95. Thus, in violation of its Permit, which only authorizes coal ash waste discharges from one outfall—Outfall 001—TVA has been and continues to operate what is essentially a closed, but leaking wastewater treatment facility.

96. To date, TVA has taken no actions to clean up the groundwater or surface water it has illegally contaminated or to stop the ongoing contamination, and it appears TVA has no plans to do so.

97. Before filing the State Complaint in response to the Conservation Groups' Notice of Intent to sue, the State did not take any enforcement action against TVA for contamination of the groundwater and the Cumberland River.

C. The Active Ash Pond Complex: Bottom Ash Pond A, Fly Ash Pond E, and Stilling Ponds B, C, and D

98. After it closed the Abandoned Ash Pond, TVA replaced it with the existing Ash Pond Complex, where TVA currently disposes of coal ash and other waste.

99. The Ash Pond Complex is located just to the north and to the northeast of the

Abandoned Ash Pond along the bank of the Cumberland River.

100. The Ash Pond Complex consists of Bottom Ash Pond A, Fly Ash Pond E, and Stilling Ponds B, C, and D, as well as a Chemical Pond.

101. Bottom Ash Pond A covers 248 acres. TVA pours 45,000 dry tons of bottom ash and 185,000 tons of dry fly ash into Pond A each year. Its dikes, made of earth and/or coal ash, are 20 to 25 feet high, and contain almost 5 million cubic yards of coal ash—or approximately 2,700,000 tons of ash.

102. Bottom Ash Pond A discharges through buried pipes into Stilling Pond B, which discharges into Stilling Pond C, then to Stilling Pond D, then to the Cumberland River.

103. Ash Pond E covers 167 acres. Its dikes are constructed over fly ash and are approximately 25 to 30 feet high. Ash Pond E contains almost 5,000,000 cubic yards of coal ash, or over 2,500,000 tons of coal ash. TVA no longer sluices ash into to Fly Ash Pond E.

104. Ash Pond E discharges into Stilling Pond C, then to Stilling Pond D, then to the Cumberland River.

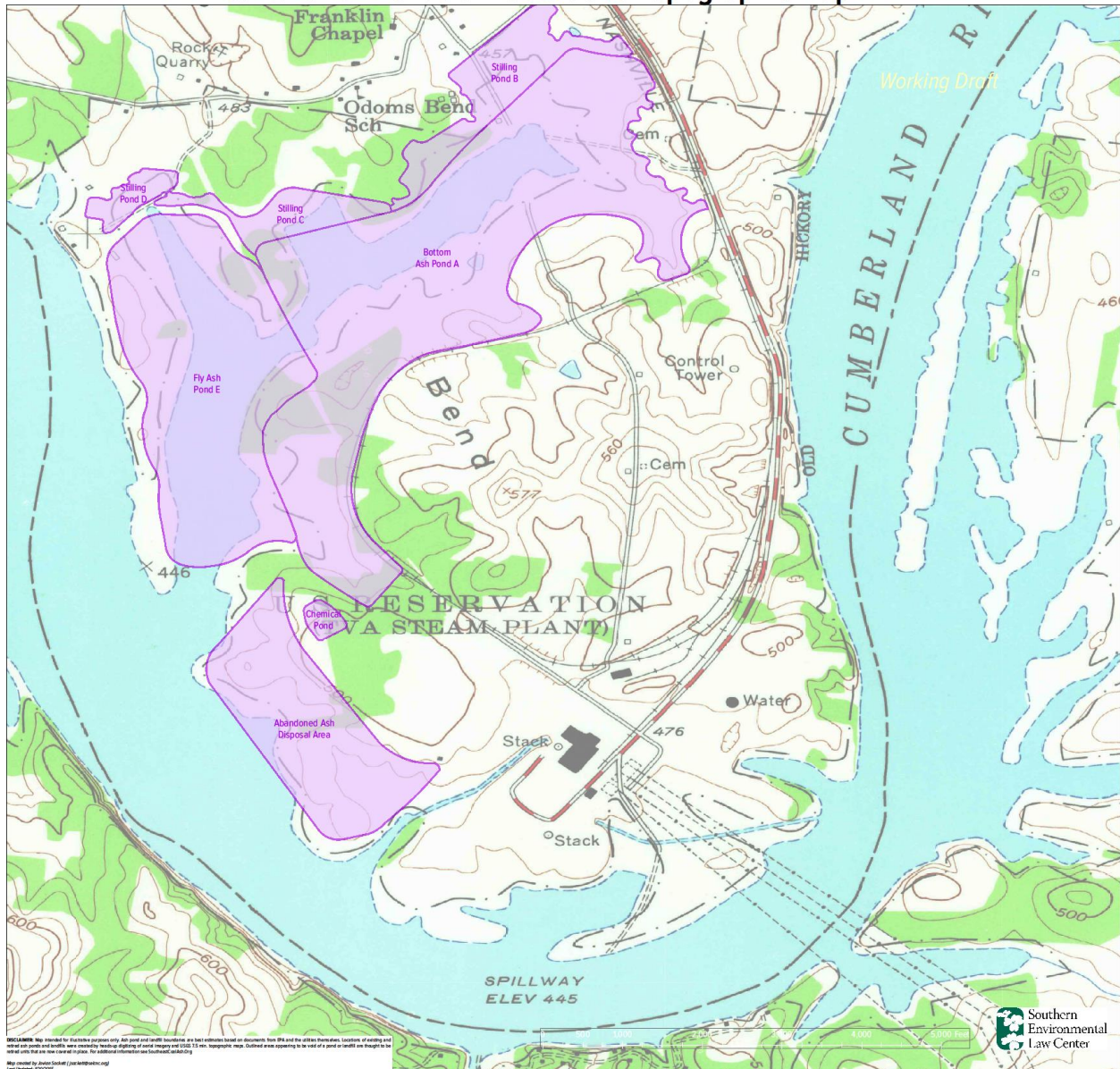
105. The Ash Pond Complex also provides drainage for approximately 1,059 acres of the Gallatin Plant, including ash ponds, coal pile runoff, and metal waste treatment ponds and a chemical pond totaling 931.7 acres, as well as an ash disposal area, asbestos disposal area, and other drainage areas.

106. According to TVA's spill response documents, the chemical pond and the ash ponds serve as fuel oil emergency containment when the primary containment fails. In at least one instance in 2006, TVA put 290,000 gallons of diesel fuel/fuel oil into the ash ponds.

107. According to maps prepared by the United States Geological Survey that pre-date

TVA's creation of this Ash Pond Complex, this area appears to have been a part of the Cumberland River and/or Sinking Creek, both of which are waters of the United States. The map below shows the two northern-most ash ponds, Fly Ash Pond E and Bottom Ash Pond A, in purple with Sinking Creek in blue under them.

Current Ash Ponds on 1995 USGS Topographic Map



108. TVA operates the Ash Pond Complex pursuant to NPDES Permit No. TN0005428, most recently re-issued by TDEC's Division of Water Resources on June 26, 2012.

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109. The NPDES Permit authorizes TVA to discharge a litany of pollutants from the Ash Pond Complex into the Cumberland River from one outfall structure, located at approximately river mile 240.5 (“Outfall 001”). This discharge derives from a mix of wastewater streams, including ash transport water, demineralization wastewater, oils and laboratory chemicals, boiler blowdown, asbestos decontamination wastewater, ash sluice water leakage, coal pile and coal barge runoff, and storm water runoff.

110. The Permit does not impose any limits on the discharge of coal ash byproduct constituents from Outfall 001. Instead, it requires only that the quantity of coal ash byproduct constituents, including aluminum, arsenic, barium, beryllium, cadmium, chromium, iron, lead, mercury, manganese, nickel, selenium, and thallium, be monitored and reported to TDEC.

111. According to documents filed by TVA with TDEC, TVA has, in the last calendar year, discharged over 8,000 toxic weighted pounds of arsenic, over 8,000 toxic weighted pounds of aluminum, 3,400 toxic weighted pounds of selenium, and as many as hundreds of toxic weighted pounds of other metals directly to the Cumberland River through Outfall 001.

112. Outfall 001 is the only authorized discharge point for wastewater from the Ash Pond Complex to the Cumberland River.

113. Any discharges from the Ash Pond Complex at the Gallatin Plant other than those specifically identified in the NPDES Permit, and in the manner identified in the NPDES Permit, *i.e.*, discharges other than those through Outfall 001, would constitute a violation of the NPDES Permit and the federal Clean Water Act.

114. In addition to its discharges through the permitted wastewater outfall, TVA illegally discharges pollutants from the Gallatin Plant coal ash ponds into the Cumberland River.

115. TVA has approximately 4 groundwater monitoring wells adjacent to the 415-acre Ash Pond Complex named GAF-17, 23, 24, and 25.

116. TVA's monitoring wells have shown that the groundwater under and around the Ash Pond Complex is contaminated by a number of metals and other pollutants, including aluminum, cobalt, iron, manganese, and sulfate, which are present in concentrations above state and federal standards.

117. TVA has also identified numerous seeps from the Abandoned Ash Pond and the Ash Pond Complex, and is currently monitoring approximately 12 seeps. These unpermitted discharges, or "seeps," consist of contaminants that leak out of TVA's coal ash ponds, discharging directly into the Cumberland River.

118. In addition to the approximately 12 existing seeps TVA identified, the Conservation Groups documented two seeps (referred to as "Seep A" and "Seep B") close to TVA's Monitoring Well 17 where wastewater is discharging into the Cumberland River, as well as two additional seeps on the east bank of the peninsula (referred to as "Seep C" and "Seep D").

119. The NPDES Permit requires TVA to conduct a daily inspection of the impoundments, maintain records of these inspections, take immediate corrective action once a potential compromise is discovered, and report within 24 hours the discovery of a change that indicates a potential compromise to the structural integrity of a dike or the impoundment.

120. TVA failed to adequately inspect and maintain its impoundments, and has failed to report potential and actual compromises in the impoundments.

121. Because TVA fails to adequately inspect, monitor, and maintain its coal ash impoundments, TVA had not identified or repaired the seeps identified by the Conservation

Groups prior to the Conservation Groups' discovery of them. Nor had TVA reported them to TDEC.

122. It is not surprising that there are seeps on both the eastern and western sides of the peninsula as the groundwater flows into the Cumberland River in all directions.

123. Contaminated water coming from these seeps was found to contain elevated levels of aluminum, arsenic, barium, boron, cadmium, dissolved solids, iron, lead, manganese, mercury, nickel, selenium, sulfate, and thallium.

124. Seeps from the coal ash pond dike walls discharge coal ash pollutants in excess of state and federal standards. All of the seeps are illegal, unpermitted discharges of wastewater other than through a permitted outfall and violations of the Clean Water Act.

D. Sampling Results

125. As set forth above, in February, 2015, independent testing of the sediment at four locations at the shore of the Cumberland River adjacent to the Abandoned Ash Pond showed levels of arsenic above EPA Region 4 sediment screening values, two of the sediment samples exceeded EPA Region 4 sediment screening values for copper and nickel, and one exceeded that standard for zinc.

126. TVA's own groundwater monitoring well data between February of 2008 and July of 2014 show contaminants in the groundwater at its wells.

127. The groundwater monitoring wells are numbered with the prefix "GAF" and their location is shown on Exhibit 6, attached. GAF 19R, 20, 21, 22, 26 and 27 are located in the vicinity of the Abandoned Ash Pond and GAF 17, 23, 24, and 25 are located in the vicinity of the Ash Pond Complex.

128. Table 1 below shows the maximum value TVA reported to TDEC during that time

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period.¹

TABLE 1

Parameter	GAF-17	Standard Exceeded
Arsenic (µg/L)	1.5	
Barium (µg/L)	38	
Boron (mg/L)	1.3	
Cadmium (µg/L)	2.1	TDEC Fish & Aquatic Life (Continuous)
Chromium (µg/L)	6.3	
Cobalt (µg/L)	7.8	
Dissolved Solids (mg/L)	630	Secondary MCL
Iron (mg/L)	3.1	Secondary MCL
Manganese (µg/L)	1,500	Secondary MCL
Nickel (µg/L)	9.7	
Selenium (µg/L)	1.3	
Sulfate (mg/L)	240	
Zinc (µg/L)	42	

Parameter	GAF-19R	Standard Exceeded
Aluminum (mg/L)	130	Secondary MCL
Arsenic (µg/L)	135 [†]	Primary MCL/TDEC Domestic Water Supply
Barium (µg/L)	100	
Beryllium (µg/L)	24.5	
Boron (mg/L)	4.5	EPA One-day Health Advisory
Cadmium (µg/L)	7.9	TDEC Fish & Aquatic Life (Continuous)
Calcium (mg/L)	456	
Chloride (mg/L)	2.66	
Chromium (µg/L)	3.57	
Cobalt (µg/L)	320	
Copper (µg/L)	10.1	
Dissolved Solids (mg/L)	6,700	TDEC Domestic Water

¹ An MCL is the legal threshold limit on the amount of a substance that is allowed in public water systems under the Safe Drinking Water Act. The limit is usually expressed as a concentration in milligrams or micrograms per liter of water. TDEC also has water standards for waters like the Cumberland River that are used for domestic water supply. Test results for substances for which there is no standard or when the results did not exceed current standards are also summarized below, because many of the results suggest the presence of coal ash contamination with the potential for health and ecosystem impacts. The independent testing results are presented below in Table 2.

Parameter	GAF-19R	Standard Exceeded
		Supply
Fluoride (mg/L)	0.397	
Iron (mg/L)	920	Secondary MCL
Lead (µg/L)	2.1	
Magnesium (mg/L)	28.2	
Manganese (µg/L)	33,000	Secondary MCL
Mercury (µg/L)	0.3	
Nickel (µg/L)	250	TDEC Fish & Aquatic Life (Continuous)
Potassium (mg/L)	14.5	
Selenium (µg/L)	38.2	TDEC Fish & Aquatic Life (Continuous)
Sodium (mg/L)	13.4	
Sulfate (mg/L)	6,300	Secondary MCL
Vanadium (µg/L)	66	
Zinc (µg/L)	730	TDEC Fish & Aquatic Life (Continuous/Maximum)

†Arsenic testing performed by three laboratories for same sampling date. 135 µg/L was the highest value, followed by 15.8 and “<20” µg/L.

Parameter	GAF-20	Standard Exceeded
Aluminum (mg/L)	1.6	Secondary MCL
Arsenic (µg/L)	78	Primary MCL/TDEC Domestic Water Supply
Barium (µg/L)	27	
Boron (mg/L)	5.8	EPA One-day Health Advisory
Chromium (µg/L)	3.2	
Cobalt (µg/L)	250	
Dissolved Solids (mg/L)	2,300	TDEC Domestic Water Supply
Iron (mg/L)	78	Secondary MCL
Manganese (µg/L)	22,000	Secondary MCL
Nickel (µg/L)	39	
Sulfate (mg/L)	2,000	Secondary MCL
Zinc (µg/L)	30.6	

Parameter	GAF-21	Standard Exceeded
Aluminum (mg/L)	10	Secondary MCL
Cadmium (µg/L)	5.8	Primary MCL/TDEC Domestic Water Supply

Parameter	GAF-21	Standard Exceeded
Cobalt (µg/L)	330	
Dissolved Solids (mg/L)	1,900	TDEC Domestic Water Supply
Manganese (µg/L)	18,000	Secondary MCL
Nickel (µg/L)	110	TDEC Domestic Water Supply
Sulfate (mg/L)	1,800	Secondary MCL
Zinc (µg/L)	280	TDEC Fish & Aquatic Life (Continuous/Maximum)

Parameter	GAF-22	Standard Exceeded
Aluminum (mg/L)	6	Secondary MCL
Barium (µg/L)	12.6	
Chromium (µg/L)	2.55	
Cobalt (µg/L)	4.6	
Dissolved Solids (mg/L)	320	
Iron (mg/L)	10	Secondary MCL
Manganese (µg/L)	520	Secondary MCL
Sulfate (mg/L)	32	
Vanadium (µg/L)	14	
Zinc (µg/L)	39	

Parameter	GAF-23	Standard Exceeded
Aluminum (mg/L)	0.96	Secondary MCL
Arsenic (µg/L)	1.1	
Barium (g/L)	61	
Chromium (µg/L)	1.6	
Cobalt (µg/L)	2.2	
Iron (mg/L)	1.1	Secondary MCL
Manganese (µg/L)	300	Secondary MCL
Nickel (µg/L)	8.2	
Sulfate (mg/L)	260	Secondary MCL
Zinc (µg/L)	11	

Parameter	GAF-24	Standard Exceeded
Arsenic (µg/L)	1.3	
Barium (µg/L)	29.1	
Dissolved Solids (mg/L)	730	TDEC Domestic Water Supply
Nickel (µg/L)	9.7	
Sulfate (mg/L)	240	

Parameter	GAF-25	Standard Exceeded
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Antimony (µg/L)	1.2	
Arsenic (µg/L)	1.9	
Barium (µg/L)	101.4	
Cobalt (µg/L)	2.5	
Dissolved Solids (mg/L)	440	
Manganese (µg/L)	210	Secondary MCL
Nickel (µg/L)	2.6	
Selenium (µg/L)	1.7	
Sulfate (mg/L)	46	

Parameter	GAF-26	Standard Exceeded
Arsenic (µg/L)	3.82	
Barium (µg/L)	33.9	
Boron (mg/L)	5.9	EPA One-day Healthy Advisory
Chromium (µg/L)	3.08	
Cobalt (µg/L)	17	
Dissolved Solids (mg/L)	1,600	TDEC Domestic Water Supply
Iron (mg/L)	17	Secondary MCL
Manganese (µg/L)	9,400	Secondary MCL
Nickel (µg/L)	5.4	
Sulfate (mg/L)	1,000	Secondary MCL

Parameter	GAF-27	Standard Exceeded
Arsenic (µg/L)	15	Primary MCL/TDEC Domestic Water Supply
Barium (µg/L)	68.3	
Boron (mg/L)	5.4	EPA One-day Health Advisory
Fluoride (mg/L)	0.214	
Manganese (µg/L)	740	Secondary MCL
Sulfate (mg/L)	970	
Zinc (µg/L)	14	

129. Independent testing on May 7 and August 25, 2014, revealed the following pollutants at Seep A, adjacent to the Ash Pond Complex and Fly Ash Pond E. The highest values found on those two dates are shown below.

TABLE 2**Seep A**

Parameter	Seep A 5-7-14 and 8-25-14 (mg/L)	Standard Exceeded
Aluminum	120	Secondary MCL
Arsenic	0.13	Primary MCL/TDEC Domestic Water Supply
Barium	2.4	EPA One-day Health Advisory
Boron	12	EPA One-day Health Advisory
Cadmium	0.0093	TDEC Fish & Aquatic Life (Continuous)
Calcium	360	
Chloride	14	
Chromium	0.036	
Cobalt	2.6	
Copper	0.19	
Dissolved Solids	660	TDEC Domestic Water Supply
Iron	500	Secondary MCL
Lead	0.23	TDEC Fish & Aquatic Life (Continuous)
Lithium	0.05	
Magnesium	18	
Manganese	460	Secondary MCL
Mercury	0.000091	TDEC Recreation (“Water and Organisms”)
Nickel	0.35	TDEC Fish & Aquatic Life (Continuous)
Phosphorus, Total	4.2	
Selenium	0.075	TDEC Fish & Aquatic Life (Continuous)
Silicon	80.0	
Sodium	44.0	
Strontium	1.0	
Sulfate	310	Secondary MCL
Sulfur	150	
Thallium	0.019	TDEC Recreation (“Water and Organisms”)
Vanadium	0.18	

Parameter	Seep A 5-7-14 and 8-25-14 (mg/L)	Standard Exceeded
Zinc	1.2	

130. In addition, sediment sampled on August 25, 2014 revealed contamination, indicating that the pollutants have been seeping at Seep A.

Parameter	Seep A Sediment Sample 8-25-14 (mg/kg)
Aluminum	9800
Arsenic	18
Barium	430
Beryllium	0.71
Boron	140
Calcium	12,000
Chloride	420.00
Chromium	21
Cobalt	240.0
Copper	11.0
Iron	33,000
Lead	24.0
Lithium	8.7
Magnesium	650
Manganese	92,000
Mercury	0.054
Nickel	35
Selenium	130
Silicon	980.0
Sodium	500.0
Strontium	100.0
Sulfate	1100
Sulfur	5000
Total Solids	18.4
Vanadium	8.70
Zinc	65

131. Independent testing on May 7, 2014 revealed the following pollutants at Seep B adjacent to the Ash Pond Complex, Fly Ash Pond E:

Seep B

Parameter	Seep B 5-7-14 (mg/L)	Standard Exceeded
Boron	11	EPA One-day Health Advisory
Chloride	14.0	
Cobalt	0.0160	
Dissolved Solids	500	TDEC Domestic Water Supply
Iron	0.33	
Magnesium	3.9	
Manganese	10	Secondary MCL
Nickel	0.0030	
Strontium	0.21	
Sulfate	260	Secondary MCL
Vanadium	0.0036	

132. Independent testing on August 25th, 2014 revealed the following pollutants at Seep C on the east side of the peninsula:

Seep C

Parameter	Seep C 8-25-14 (mg/L)	Standard Exceeded
Aluminum	0.081	Secondary MCL
Arsenic	0.001	
Barium	0.0094	
Boron	0.085	
Calcium	49	
Chloride	6.1	
Cobalt	0.00028	
Copper	0.00081	
Dissolved Solids	170	
Iron	0.1	
Magnesium	4.3	
Manganese	0.087	Secondary MCL
Molybdenum	0.00080	
Nickel	0.00064	
Phosphorus, Total	0.094	

Silicon	3.7	
Sodium	1.1	
Strontium	0.081	
Sulfate	20	
Sulfur	5	

133. Sediment sampled on August 25, 2014 revealed contamination, indicating that the pollutants have been seeping at Seep C.

Parameter	Seep C Sediment Sample 8-25-14 (mg/kg)
Aluminum	54,000
Arsenic	7.8
Barium	220
Beryllium	2.70
Boron	21
Calcium	12,000
Chloride	100
Chromium	48
Cobalt	12
Copper	15
Iron	54,000
Lead	17
Lithium	38
Magnesium	6600
Manganese	700
Mercury	0.040
Nickel	30
Selenium	4
Silicon	540
Sodium	170
Strontium	54
Sulfate	10
Sulfur	82
Total Solids	63.1
Vanadium	48
Zinc	81

134. Again, independent testing on August 25, 2014 revealed the following pollutants at

Seep D on the east side of the peninsula:

Seep D

Parameter	Seep D 8-25-14 (mg/L)	Standard Exceeded
Aluminum	1.8	Secondary MCL
Arsenic	0.0019	
Barium	0.053	
Boron	0.077	
Calcium	41	
Chloride	7.20	
Chromium	0.00098	
Cobalt	0.0021	
Copper	0.0072	
Dissolved Solids	210	
Iron	4.7	Secondary MCL
Lead	0.0031	
Magnesium	7.50	
Manganese	0.67	Secondary MCL
Molybdenum	0.00052	
Nickel	0.0046	
Nitrate-Nitrite	0.08	
Phosphorus, Total	0.92	
Selenium	0.00035	
Silicon	3.8	
Sodium	5.80	
Strontium	0.14	
Sulfate	69.00	
Sulfur	7.6	
Vanadium	0.0027	
Zinc	0.0580	

135. Sediment sampled on August 18, 2014 revealed contamination, indicating that the pollutants have been seeping at Seep D.

Parameter	Seep D Sediment Sample 8-18-14 (mg/kg)
Aluminum	38,000
Arsenic	5.90
Barium	220.00
Beryllium	1.70
Boron	52.00
Calcium	19,000
Chloride	42.00
Chromium	26
Cobalt	11.00
Copper	19
Iron	31,000
Lead	27.0
Lithium	24.00
Magnesium	4900
Manganese	290
Mercury	0.080
Nickel	23
Silicon	380.0
Sodium	380.00
Strontium	120.00
Sulfate	42.00
Sulfur	4200.00
Total Solids	28.8
Vanadium	38.00
Zinc	190

136. Finally, on August 25, 2014, a white cloudy area of discharge was observed near Seeps A and B adjacent to the Ash Pond Complex, Fly Ash Pond E.

White Cloudy Area

Parameter	White Cloudy Area Observed Near Seeps A and B 8-25-14 (mg/L)	Standard Exceeded
Aluminum	0.16	Secondary MCL
Arsenic	0.0013	
Barium	0.066	
Boron	2.9	
Calcium	71	
Chloride	7.10	
Cobalt	0.0011	
Copper	0.0022	
Dissolved Solids	350	
Iron	0.57	Secondary MCL
Lead	0.00039	
Magnesium	7.2	
Manganese	4.9	EPA Lifetime Health Advisory
Molybdenum	0.00041	
Nickel	0.0012	
Phosphorus, Total	0.24	
Silicon	2.5	
Sodium	18.0	
Strontium	0.21	
Sulfate	64	
Sulfur	23	
Zinc	0.0029	

137. According to the Agency for Toxic Substances and Disease Registry (“ATSDR”), exposure to high levels of aluminum has been connected to bone and brain diseases, including Alzheimer’s disease in humans. Animals exposed to high levels of aluminum can also have damage to their nervous system. Exposure to aluminum has also been shown to be harmful to unborn and developing animals because it can cause delays in skeletal and neurological development.

138. Arsenic is a known carcinogen that causes multiple forms of cancer in humans. It is also a toxic pollutant, 40 C.F.R. § 401.15, and a priority pollutant, 40 C.F.R. Part 423 App'x. A. Arsenic is also associated with non-cancer health effects of the skin and the nervous system. The ATSDR reports that there is some evidence that in childhood, long-term exposure to arsenic may result in lower IQ scores and exposure to arsenic in the womb and early childhood may increase mortality in young adults.

139. Ingesting small amounts of barium for a short period may cause vomiting, abdominal cramps, diarrhea, difficulties in breathing, increased or decreased blood pressure, numbness around the face, and muscle weakness. Animals exposed to barium can suffer swelling and irritation of the intestines, changes in organ weights, decreased body weight, kidney damage, and death.

140. Oral exposure to boron has led to developmental and reproductive toxicity in multiple species. Specific effects include testicular degeneration, reduced sperm count, reduced birth weight, and birth defects.

141. Cadmium exposure has been strongly correlated with renal damage, even with low level exposure. There is also a correlation between exposure to cadmium and birth defects and fetal deaths in animals.

142. Iron can render water unusable by imparting a rusty color and a metallic taste and causing sedimentation and staining. To prevent these effects the EPA has set a secondary drinking water standard of 300 µg/L.

143. Lead is a very potent neurotoxicant that is highly damaging to the nervous system. Health effects associated with exposure to lead include, but are not limited to, neurotoxicity, developmental delays, hypertension, impaired hearing acuity, impaired hemoglobin synthesis, and

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male reproductive impairment. Importantly, many adverse health effects may occur without overt signs of toxicity. Lead is also classified by the EPA as a “probable human carcinogen.”

144. Manganese is known to be toxic to the nervous system. Manganese concentrations greater than 50 µg/L render water unusable by discoloring the water, giving it a metallic taste, and causing black staining. Exposure to high levels can affect the nervous system and exposure to very high levels may impair brain development in children.

145. Exposure to nickel can cause dermatitis in humans, as well as an increase in risk of lung and nasal cancers. EPA has classified nickel refinery dust and nickel subsulfide as Group A, human carcinogens, and nickel carbonyl as a Group B2, probable human carcinogen.

146. High concentrations of sulfates in drinking water can cause diarrhea. The EPA has established a secondary MCL of 250 mg/L and a health-based advisory of 500 mg/L.

147. Selenium is an essential element, but it is also listed as a toxic pollutant, 40 C.F.R. § 401.15, and excess exposure can cause a chemical-specific condition known as selenosis, with symptoms that include hair and nail loss, as well as neuropathy or nerve damage. Selenium causes severe reproductive impacts on fish resulting in skeletal deformities and missing body parts. Such reproductive failures can eventually cause fish populations to collapse.

148. Thallium is a toxic pollutant, 40 C.F.R. § 401.15, and exposure to high levels of thallium can result in harmful health effects. Studies in rats have shown adverse developmental effects from exposure to high levels of thallium, and some adverse effects on the reproductive system after ingesting thallium for several weeks.

149. Concurrent exposure to multiple contaminants may intensify existing effects of individual contaminants, or may give rise to interactions and synergies that create new effects. Where several coal ash contaminants share a common mechanism of toxicity or affect the same

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body organ or system, exposure to several contaminants concurrently produces a greater chance of increased risk to health.

150. In addition to the unpermitted discharges, the locations of which are described above, TVA has violated the terms of its NPDES Permit, and thus violated the Clean Water Act, by allowing pollutants and coal ash constituents including aluminum, arsenic, barium, beryllium, boron, cadmium, cobalt, iron, lead, manganese, selenium, nickel, thallium, and zinc to escape from its unlined ponds into the groundwater at the Gallatin Plant and into navigable waters of the United States. TVA's unauthorized discharges are prohibited by the Permit and the CWA.

VI. CAUSES OF ACTION

A. UNAUTHORIZED DISCHARGES THROUGH HYDROLOGIC FLOW INTO WATERS OF THE UNITED STATES

151. The CWA prohibits “any addition of any pollutant to navigable waters from any point source” except in compliance with an NPDES permit. 33 U.S.C. § 1362(12)(A). “[T]he touchstone for finding a point source is the ability to identify a discrete facility from which pollutants have escaped.” *Washington Wilderness Coal. v. Hecla Mining Co.*, 870 F. Supp. 983, 987 (E.D. Wash. 1994).

152. Because there is a direct hydrologic connection between the ash ponds and the Cumberland River, TVA's discharges from the ash ponds via the groundwater to the river are point source discharges that violate the CWA because they are not authorized by any NPDES permit. This is not just slow pore-space seepage of contaminants, but also conduit flow through fissures and sinkholes that provides rapid connectivity with little to no pollutant attenuation.

153. EPA has stated repeatedly that the CWA applies to such hydrologically-connected groundwater discharges. 66 Fed. Reg. 2960, 3015 (Jan. 12, 2001) (“EPA is restating that the

Agency interprets the Clean Water Act to apply to discharges of pollutants from a point source via ground water that has a direct hydrologic connection to surface water.”); *accord* 56 Fed. Reg. 64876-01, 64892 (Dec. 12, 1991) (“[T]he Act requires NPDES permits for discharges to groundwater where there is a direct hydrological connection between groundwaters and surface waters.”); 55 Fed. Reg. 47990, 47997 (Nov. 16, 1990) (announcing stormwater runoff rules and explaining that discharges to groundwater are covered by the rule when there is a “hydrological connection between the groundwater and a nearby surface water body.”).

154. In a 1998 site report, EPA stated that “[a] documented ground water hydrological connection between a source and surface water discharge may be viewed as a conduit; or a discernible, confined, and discrete conveyance,” *i.e.*, a point source. U.S. EPA, Report on Hydrological connection Associated with MolyCorp Mining Activity, Questa, New Mexico, at 3 (Feb. 13, 1998). As a result, EPA has identified and regulated as point sources impoundments leaching into groundwater that discharge directly to a neighboring river, exactly as with the Gallatin Plant.

155. In its response to a comment questioning EPA’s jurisdiction to regulate such discharges, EPA stated, “[t]hat a point source may transmit the pollutants to those surface waters through directly connected groundwater *does not deprive EPA of jurisdiction over that addition . . . to protect jurisdictional surface waters from discharges through groundwater*, not to protect groundwater quality per se.” U.S. EPA, Response to Comments on the Proposed National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges from Concentrated Animal Feeding Operations (CAFOs) in New Mexico (NMG010000) (emphasis added).

156. In its fact sheet for another NPDES permit, EPA explained, “[i]n most surface

waters flow is sustained throughout much of the year by groundwater inflow. As a result, pollutants which may leak from containment structures . . . to the groundwater will typically move toward nearby surface waters where they will be discharged and [a]ffect water quality in the receiving waters.” U.S. EPA NPDES Permit # LA0068420 Statement of Basis. As a result, EPA reiterated its authority to regulate such groundwater discharges “[t]o *protect surface water quality* from the deleterious effects of these discharges.” *Id.* (emphasis added).

157. Moreover, because the CWA prohibits “any addition of any pollutant to navigable waters from any point source,” 33 U.S.C. § 1362(12) (emphasis added), EPA has exercised its CWA authority to regulate the leaching of contaminants to hydrologically-connected groundwater even where the receiving surface water did not exceed applicable surface water quality standards (“WQS”) and insufficient information existed to document that direct discharges to those surface waters exceeded the applicable WQS. *See* U.S. EPA, Report on Hydrological Connection Associated with Molycorp Mining Activity, *supra*, at 3; *see also* *Committee to Save Mokelumne River v. East Bay Mun. Utility Dist.*, 13 F.3d 305, 309 (9th Cir. 1993) (CWA “does not impose liability only where a point source discharge creates a net increase in the amount of pollution.”)

158. EPA’s interpretation of the scope of the CWA is entitled to deference. *Chevron U.S.A. Inc. v. Natural Res. Def. Council*, 467 U.S. 837 (1984); *U.S. v. Mead*, 533 U.S. 218, 226-28 (2001); *accord* *U.S. v. W.R. Grace & Co.*, 429 F.3d 1224, 1237 (9th Cir. 2005).

159. In addition to EPA, “[t]he majority of courts have held that groundwaters that are hydrologically connected to surface waters are regulated waters of the United States, and that unpermitted discharges into such groundwaters are prohibited under section 1311.” *Friends of Santa Fe County v. LAC Minerals, Inc.*, 892 F. Supp. 1333, 1358 (D.N.M. 1995). *See, e.g., N. Cal. River Watch v. City of Healdsburg*, 496 F.3d 993 (9th Cir. 2007) (finding CWA coverage

from hydrologic connection), *aff'g* No. C01-04686WHA, 2004 WL 201502 (N.D. Cal. Jan. 23, 2004), *cert. denied*, 552 U.S. 1180 (2008); *Quivira Mining Co. v. U.S. EPA*, 765 F.2d 126, 130 (10th Cir. 1985) (finding CWA coverage where discharges ultimately affected navigable-in-fact streams via underground flows); *U.S. Steel Corp. v. Train*, 556 F.2d 822, 852 (7th Cir. 1977) (CWA “authorizes EPA to regulate the disposal of pollutants into deep wells, at least when the regulation is undertaken in conjunction with limitations on the permittee’s discharges into surface waters.”); *Hawai’i Wildlife Fund v. County of Maui*, Civ. No. 12-00198 SOM/BMK, 2014 WL 2451565, *18 (D. Haw. May 30, 2014) (discharge into injection wells of pollutants which migrate through groundwater to the ocean violates the CWA); *Raritan Baykeeper, Inc. v. NL Indus., Inc.*, No. 09-4117, 2013 WL 103880, *15 (D.N.J. Jan. 8, 2013) (plaintiffs adequately alleged groundwater was a point source); *Greater Yellowstone Coal. v. Larson*, 641 F. Supp. 2d 1120, 1138 (D. Idaho 2009) (“there is little dispute that if the ground water is hydrologically connected to surfacewater, it can be subject to” the CWA); *Northwestern Env’tl. Def. Ctr. v. Grabhorn, Inc.*, No. CV-08-548-ST, 2009 WL 3672895, *11 (D. Or. Oct. 30, 2009) (“In light of the EPA’s regulatory pronouncements, this court concludes that . . . the CWA covers discharges to navigable surface waters via hydrologically connected groundwater.”); *Hernandez v. Esso Std. Oil Co. (Puerto Rico)*, 599 F. Supp. 2d 175, 181 (D.P.R. 2009) (“the CWA extends federal jurisdiction over groundwater that is hydrologically connected to surface waters that are themselves waters of the United States”); *Coldani v. Hamm*, No. Civ. S-07-660 RRB EFB, 2007 WL 2345016, *7 (E.D. Cal. Aug. 16, 2007) (a claim of pollution of groundwater hydrologically connected to surface waters that constitute navigable waters falls within the purview of the CWA); *Northern California Riverwatch v. Mercer Fraser Co.*, No. C-04-4620 SC, 2005 WL 2122052, *2 (N.D. Cal. Sept. 1, 2005) (“the regulations of the CWA do encompass the discharge of pollutants from wastewater

basins to navigable waters via connecting groundwaters”); *Idaho Rural Council v. Bosma*, 143 F. Supp. 2d 1169, 1180 (D. Idaho 2001) (“the CWA extends federal jurisdiction over groundwater that is hydrologically connected to surface waters that are themselves waters of the United States”); *Mutual Life Ins. Co. v. Mobil Corp.*, No. Civ. A. 96-CV1781, 1998 WL 160820, *3 (N.D.N.Y. Mar. 31, 1998) (allegation of “a hydrological connection between the contaminated groundwater and navigable waters” was sufficient to state a claim); *Williams Pipe Line Co. v. Bayer Corp.*, 964 F. Supp. 1300, 1319-20 (S.D. Iowa 1997) (where groundwater flows toward surface waters, there is “more than the mere possibility that pollutants discharged into groundwater will enter ‘waters of the United States,’” and discharge of petroleum into this hydrologically-connected groundwater violates the CWA); *Washington Wilderness Coal.*, 870 F. Supp. at 990 (“since the goal of the CWA is to protect the quality of surface waters, any pollutant which enters such waters, whether directly or through groundwater, is subject to regulation” under the CWA); *Sierra Club v. Colo. Ref. Co.*, 838 F. Supp. 1428, 1434 (D. Colo. 1993) (“discharge of any pollutant into ‘navigable waters’ includes such discharge which reaches ‘navigable waters’ through groundwater”); *McClellan Ecological Seepage Situation (MESS) v. Weinberger*, 707 F. Supp. 1182, 1196 (E.D. Cal. 1988) (groundwater that is “naturally connected to surface waters that constitute ‘navigable waters’ under the Act” is covered by CWA), *vacated on other grounds*, 47 F.3d 325 (9th Cir. 1995).

160. The United States District Court for the Middle District of Tennessee has embraced the logic of these decisions, stating that it “elects to follow those courts holding groundwater is subject to the CWA provided an impact on federal waters.” *Association Concerned Over Resources and Nature, Inc. v. Tennessee Aluminum Processors, Inc.*, No. 1:10-00084, 2011 WL 1357690, *17 (M.D. Tenn. Apr. 11, 2011). The reasoning behind these decisions

is straightforward:

Congress has explicitly stated that the objective of the CWA “is to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” Therefore, *it would hardly make sense for the CWA to encompass a polluter who discharges pollutants via a pipe running from the factory directly to the riverbank, but not a polluter who dumps the same pollutants into a man-made settling basin some distance short of the river and then allows the pollutants to seep into the river via the groundwater.*

Northern Cal. Riverwatch, 2005 WL 2122052, at *2 (internal citation omitted) (emphasis added).

That is precisely the situation at the Gallatin Plant, and accordingly the CWA applies to TVA’s unpermitted discharges from the coal ash ponds that discharge contaminated groundwater into the Cumberland River.

161. Because these hydrologically connected discharges from the unlined coal ash ponds to navigable waters of the United States are continuous and ongoing, they will continue after the date of the filing of this lawsuit.

B. IMPROPER USE OF SINKING CREEK, A WATER OF THE UNITED STATES, AS A WASTEWATER TREATMENT FACILITY

162. Sinking Creek/Old Hickory Lake on the peninsula of Odom’s Bend—the peninsula where the Gallatin Facility is located—are waters of the United States. 40 C.F.R. § 122.2 (definition of “Waters of the United States” at (a) to include waters “currently used” and “used in the past” and (e)). An “impoundment[] of waters otherwise defined as waters of the United States,” it is itself a water of the United States. 40 C.F.R. § 122.2 (“waters of the United States” at (d)).

163. The Rivers and Harbors Act of 1946, Pub. L. 79-525, 60 Stat. 634 (1946), authorized construction of Old Hickory Lock and Dam as a unit of a comprehensive development plan for the Cumberland River Basin. Construction began in January 1952, and dam closure was

completed in 1954. Maps from the 1950's show open water in the location of the current ash ponds, connecting the ash pond site with Old Hickory Lake/Cumberland River. Earlier maps label at least one stream: Sinking Creek. The earthen dams that now offer a degree of separation between the coal ash ponds and Old Hickory Lake/Cumberland River appear to have been constructed sometime after the plant began operating.

164. Because Sinking Creek/Old Hickory Lake is a water of the United States, it is not a component of a wastewater treatment facility. The Fourth Circuit has affirmed that waters of the United States remain waters of the United States even if they are impounded for waste treatment. *West Virginia Coal Ass'n v. Reilly*, 932 F.2d 964 (4th Cir. 1991), *aff'g* 728 F. Supp.1276, 1290 (S.D. W.Va. 1989) (waste treatment exception to definition of waters of the United States does not apply to treatment ponds constructed in United States waters).

165. Sinking Creek/Old Hickory Lake is a water of the State and a water of the United States subject to the full protections of the CWA.

166. The NPDES Permit authorizes only one point source discharge to waters of the United States: the discharge from Outfall 001 into the Cumberland River consisting of ash transport water, chemical and nonchemical metal cleaning wastes, water treatment plant wastes, backwash, demineralization waste neutralization and RO sump discharges, miscellaneous equip cooling water (CW), micro-filtered asbestos decontamination waste water, floor washing and other low volume wastes, boiler makeup water leakage, boiler blowdown, chemical lab drain water, boiler bottom overflow sump discharge, powerhouse extension pump discharge, U-Building pad wash oil/water separator, car wash, ash sluice water leakage, coal pile and coal barge runoff, and storm water runoff.

167. Accordingly, TVA's point source discharges into Sinking Creek from the coal ash

ponds, consisting of ash sluice water, coal pile runoff, low volume wastes, and other pollutants are not authorized under the CWA. These unauthorized discharges contain toxic pollutants including arsenic, selenium, mercury, antimony, cadmium, chromium, lead, and zinc; as well as other pollutants including sulfate, copper, ammonia, nitrogen, phosphorus, iron, manganese, total dissolved solids, and total suspended solids.

168. The NPDES Permit treats the discharges of these waste streams from the coal ash lagoons into Sinking Creek as internal outfalls within a waste treatment system. It contains no limits for toxic pollutants such as selenium and arsenic.

169. Because the Permit does not protect water quality, and instead treats Sinking Creek as an internal component of a wastewater treatment system, it does not and cannot validly authorize TVA's highly contaminated toxic discharges to this water of the United States. Where the permitting authority "has failed to fulfill its duties under the Act by issuing NPDES permits that do not comply with the Clean Water Act and its implementing regulations," the permit is not valid. *Miccosukee Tribe of Indians of Fla. v. U.S.*, 706 F. Supp. 2d 1296, 1302 (S.D. Fla. 2010), *aff'd* 498 Fed. App'x 899 (11th Cir. 2012) (per curiam).

170. It is beyond dispute that an NPDES permit cannot deliberately fail to protect water quality by erroneously declaring a water of the United States to be a waste treatment facility. Such a result would directly contradict the CWA's objective of restoring and maintaining the chemical, physical, and biological integrity of the Nation's waters and the NPDES permitting program's goal of eliminating discharges of pollutants into navigable waters. 33 U.S.C. § 1251(a). *See also* Pub. L. No. 80-845, 62 Stat. 1155 (1948) (Federal Water Pollution Control Act); Pub. L. 89-234, 79 Stat. 903 (1965) (Water Quality Act of 1965); Pub. L. 92-500, 86 Stat. 816 (1972) (Clean Water Act); 33 U.S.C. § 1342(a)(4) (permits issued under 1899 Rivers and Harbors act deemed

permits under 1972 Act and vice versa); 33 U.S.C. § 407 (1899 Act requiring permit for certain activities).

171. These discharges into Sinking Creek are ongoing and will continue after the date of the filing of this lawsuit.

C. ABANDONED ASH POND VIOLATIONS

172. All of the unpermitted point source discharges from the Abandoned Ash Pond into the groundwater and the Cumberland River, as described above, are continuous and ongoing violations of the Clean Water Act.

173. Because the State Complaint does not include claims for contamination of the Cumberland River from the Abandoned Ash Pond, the Conservation Groups are enforcing these violations of the Clean Water Act in this Complaint.

174. In accordance with 33 U.S. C. § 1319(d), this Court may impose a civil penalty of up to \$37,500 per day or each day any person violates the CWA and/or its implementing rules and regulations.

175. Based on current information and belief, as detailed above, TVA has violated, and is continuing to violate, the provisions of the CWA and its implementing rules and regulations.

D. ASH POND COMPLEX VIOLATIONS.

176. Any point source discharge into navigable waters of the United States from the Ash Pond Complex, including the Cumberland River, that is not authorized by a NPDES Permit, is a violation of the Clean Water Act, 33 U.S.C. § 1311(a).

177. All of the unpermitted point source discharges from the Ash Pond Complex into the groundwater and the Cumberland River, as described above, are continuous and ongoing violations of the Clean Water Act.

178. Because the State Complaint does not include claims for contamination of the Cumberland River from the Ash Pond Complex, the Conservation Groups are enforcing these violations of the Clean Water Act in this Complaint.

179. In accordance with 33 U.S. C. § 1319(d), this Court may impose a civil penalty of up to \$37,500 per day or each day any person violates the CWA and/or its implementing rules and regulations.

180. Based on current information and belief, as detailed above, TVA has violated, and is continuing to violate, the provisions of the CWA and its implementing rules and regulations.

E. NPDES PERMIT VIOLATIONS.

181. TVA has violated its NPDES Permit, and continues to do so, in various ways, including, but not limited to:

a. NPDES Permit Part I.A., Subsection (b)

182. NPDES Permit Part I.A., Subsection (b) states:

The wastewater discharge shall not contain pollutants in quantities that will be hazardous or otherwise detrimental to humans, livestock, wildlife, plant life, or fish and aquatic life in the receiving stream. The discharge activity shall not cause or contribute to violations of water quality criteria as stated in the TDEC Rules, Chapter 1200-4-2-.03. Under no circumstances may discharges create an exceedance of the numeric water quality criteria in the receiving stream for aquatic and human life as stated in State of Tennessee Rule 1200-4-3.

Permit Part I.A., Subsection (b) (emphasis added).

183. The conduit flow of groundwater from the Gallatin Plant site is through karst bedrock, with the result that there is little to no pollutant attenuation prior to reaching the Cumberland River.

184. The discharges through the contaminated groundwater underneath the Abandoned Ash Pond are detrimental to fish and aquatic life in the discharge zone of the

Cumberland River. A 2012 study commissioned by TVA found that groundwater discharging into the Cumberland River from beneath the Abandoned Ash Pond contains beryllium, cadmium, nickel and zinc at levels that “may pose a risk” to fish and aquatic life in the Cumberland River and that this risk will continue into the future. This discharge, then, violates the Permit provision cited above, that the discharge “*shall not contain pollutants in quantities that will be hazardous or otherwise detrimental to humans, livestock, wildlife, plant life, or fish and aquatic life in the receiving stream.*” It also therefore violates the CWA.

185. Likewise, the contaminants from the Gallatin Plant are discharged through the groundwater to the east, south and west of the peninsula into the Cumberland River, creating a risk of harm in both around the Gallatin Plant site and downstream to “humans, livestock, wildlife, plant life, or fish and aquatic life in the receiving stream.” Accordingly, TVA’s discharges of pollutants to waters of the United States, including the Cumberland River, Old Hickory Lake, and groundwater—constitute a violation of its Permit and thus of the Clean Water Act, making TVA subject to this citizen suit enforcement.

186. Because this Permit violations and discharges from the unlined ash ponds into navigable waters of the United States are continuous and ongoing, they will continue after the filing of a lawsuit.

b. NPDES Permit Part I.A. Subsection (c)

187. NPDES Permit Part I A. Subsection (c) states:

Sludge or any other material removed by any treatment works must be disposed of in a manner, which *prevents its entrance into or pollution of any surface or subsurface waters*. Additionally, the disposal of such sludge or other material must be in compliance with the Tennessee Solid Waste Disposal Act, TCA § 68-31-101 et seq. and the Tennessee Hazardous Waste Management Act, TCA 68-46-101 et seq.

Permit Part I.A., Subsection (c) (emphasis added).

188. TVA has violated this part of the Permit by discharging pollutants from Seeps A-D, described above, and through seeps it has identified, and throughout its unlined pond system to groundwater that is hydrologically connected to navigable waters of the United States on each and every day from November 10, 2009, to the present, including but not limited to the specific dates identified in Tables 1 and 2. TVA is thus in violation of the CWA.

c. NPDES Permit Part II.A., Subsection 4.a

189. NPDES Permit Part II.A., Subsection 4.a. requires TVA to “at all times properly operate and maintain all facilities and systems (and related appurtenances) for collection and treatment which are installed or used by the permittee to achieve compliance with the terms and conditions of the permit.”

190. In 2009, EPA determined that the coal ash ponds at the Gallatin Plant present a “significant hazard” in the event of dam failure or mis-operation. This designation indicates that such a failure could cause economic loss, environmental damage, or other harmful impacts.

191. In 2013, EPA also found that the earthen dams at the Gallatin Plant were in only “fair” condition, and remained in need of improvement. In particular, EPA concluded that the hydrologic/hydraulic safety at the Gallatin Plant was unacceptable due to the likelihood of coal ash escaping from the ponds into the Cumberland River when the river floods.

192. EPA stated that improvements to rectify these shortcomings “should be given the highest priority” because of the potential for serious impacts on human health and the environment.

193. TVA has not cured all of the deficiencies identified by EPA, and continues to operate with dangerous structural conditions, ongoing contamination of groundwater and the Cumberland River, and seeps that leak pollutants from the coal ash ponds directly into the

groundwater and the Cumberland River.

194. On June 21, 2011, TVA's Office of Inspector General issued a report finding that, under its own rules and guidance documents, TDEC should require TVA to initiate corrective measures as a result of illegal discharges into the Cumberland River.

195. Prior to filing the State Complaint in response to the Conservation Groups' Notice of Intent to sue, TDEC declined to initiate corrective measures on its own accord.

196. In addition, the Conservation Groups independently identified and documented Seeps A-D.

197. Because TVA fails to adequately inspect, monitor, and maintain its coal ash impoundments, TVA had not identified or repaired these seeps.

198. These Permit violations were and continue to be violations of TVA's Permit and of the Clean Water Act

d. NPDES Permit Part II.C., Subsection (2)

199. NPDES Permit Part II.C., Subsection (2) states:

in the case of any noncompliance which could cause a threat to public drinking supplies, or any other discharge which could constitute a threat to human health or the environment, the required notice of non-compliance shall be provided to the Division of Water Pollution Control in the appropriate regional Field Office within 24-hours from the time the permittee becomes aware of the circumstances.

200. As early as 1990, TVA was aware that the coal ash waste stored at the Gallatin Plant had contaminated groundwater and that the contaminated groundwater had impacted three domestic wells located near the Gallatin Plant. Instead of reporting this risk to human health caused by its noncompliance with permit conditions discussed above, TVA maintained as recently

as 2013 that no domestic water wells were impacted by its coal ash waste stored at the Gallatin Plant. Independent testing in 2014 showed that the contaminated groundwater at TVA's Gallatin Plant is continuing to impact domestic wells located offsite. TVA's failure to report the risk to human health caused by its non-compliance is a violation of its permit and of the Clean Water Act.

201. In addition, in 2012, TVA learned from its consultants that the groundwater contaminated by its coal ash waste discharging into the Cumberland River had and was continuing to create a risk of harm to fish and aquatic life. TVA did not report such threat to the environment to the Field Office of TDEC. This was and continues to be a violation of its Permit and of the Clean Water Act.

e. NPDES Permit Part II.C., Subsection (3)

202. NPDES Permit Part II.C., Subsection (3) states that "Sanitary Sewer Overflows are prohibited," and defines such overflows as "the discharge to land or water of wastes from any portion of the collection, transmission, or treatment system other than through permitted outfalls."

203. The Permit authorizes the discharge of treated water from the ash ponds via Outfall 001 only. Sanitary Sewer Overflows are prohibited under the Permit.

204. TVA's discharge of polluted wastewater either through seeps in the earthen dams or through the groundwater are illegal overflows. These overflows violate the express terms of the Permit and violate the Clean Water act. Such prohibited overflows are ongoing and likely to continue.

205. All of the unpermitted point source discharges from the Abandoned Ash Pond and/or the Ash Pond Complex into the Cumberland River, and each of the Permit violations described above, are continuous and ongoing violations of the Clean Water Act.

206. Based on current information and belief, as detailed above, TVA has violated, and is continuing to violate, the provisions of the CWA and its implementing rules and regulations.

207. Because the State Complaint does not include claims of contamination to the Cumberland River and/or the Permit violations described above, the Conservation Groups are enforcing these violations of the Clean Water Act in this Complaint.

208. In accordance with 33 U.S.C. § 1319(d), this Court may impose a civil penalty of up to \$37,500 per day or each day any person violates the CWA and/or its implementing rules and regulations.

PRAYER FOR RELIEF

WHEREFORE, based upon all the allegations contained in the foregoing paragraphs, the Conservation Groups respectfully request that this Court:

A. Issue a Declaratory judgment stating that TVA is violating the Clean Water Act with its ongoing unpermitted discharges of arsenic, boron, chromium, lead, manganese and other contaminants, and by allowing and causing the entering of such removed substances into the Cumberland River and Old Hickory Lake, and the groundwater at the Gallatin Plant in violation of TVA's Permit and the Clean Water Act;

B. Enter appropriate permanent injunctive relief to ensure that TVA:

- i. Prevents its coal ash impoundments from allowing or causing the entering of removed substances, including solids, sludges, materials, substances, and pollutants, into groundwater, the Cumberland River, and Old Hickory Lake;
- ii. Prevents the flow of contaminated groundwater into the Cumberland River and Old Hickory Lake;

- iii. Removes all existing coal combustion byproducts from all of the Gallatin Plant coal ash ponds and stilling ponds within a reasonable amount of time and stores them in an appropriately lined industrial solid waste landfill facility away from the Cumberland River, or any other water of the United States, with appropriate monitoring;
- iv. Remediates the contaminated groundwater beneath the Gallatin Plant resulting from its unpermitted discharges;
- v. Removes from the Cumberland River and Old Hickory Lake the pollutants it has illegally allowed to enter and discharged into these water bodies;
- vi. Provides affected residents with a safe, uncontaminated drinking water supply until such time as remediation of the groundwater is completed;
- vii. Implements a door-to-door survey of potentially contaminated drinking and domestic use wells within one mile of any groundwater monitoring well at the Gallatin Plant demonstrating exceedances;

C. Assess civil penalties against TVA of up to \$37,500 per violation per day pursuant to 33 U.S.C. §§ 1319(d), 1365(a), and 74 Fed. Reg. 626, 627 (Jan. 7, 2009);

D. Award the Conservation Groups the costs of this action, including reasonable attorney and expert fees, as authorized by 33 U.S.C. § 1365(d); and

E. Grant the Conservation Groups such further and additional relief as the Court deems just and proper.

THE CONSERVATION GROUPS HEREBY DEMAND A TRIAL BY JURY.

Respectfully submitted,

DATE: April 14, 2015



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